

IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-8 (canceled).

9. (new) In a process for the treatment of bauxite by alkaline digestion using the Bayer process to obtain alumina hydrate,

the improvement comprising removing an aliquot of spent liquor from an aluminate liquor circuit of the Bayer process, heating the aliquot of spent liquor, mixing the heated aliquot of spent liquor with ground bauxite to form a slurry, and returning the slurry to the aluminate liquor circuit,

wherein the heating step comprises heating the aliquot of spent liquor to a temperature sufficient that after said mixing step, the slurry is at a temperature greater than about 95°C.

10. (new) Process according to claim 9, wherein the heating step is sufficient that after said mixing step, the slurry is at a temperature at least about boiling temperature at atmospheric pressure.

11. (new) Process according to claim 9, additionally comprising grinding the bauxite in the presence of an aliquot representing less than 15% of the liquor.

12. (new) Process according to claim 9, wherein the ground bauxite is heated before mixing to a temperature of about the temperature to which the said aliquot of spent liquor is heated.

13. (new) Process according to claim 9, additionally comprising wet grinding the bauxite at a temperature greater than 95°C.

14. (new) Process according to claim 9, wherein the aliquot of spent liquor is an amount not exceeding 25% of total liquor flow.

15. (new) Process according to claim 9, wherein the aliquot is obtained from washer overflow, an aqueous flow output from washing of insoluble residues of alkaline digestion.

16. (new) Process according to claim 9, wherein the slurry is subjected to a predesilication treatment in a desilication autoclave, followed by a liquid / solid separation, the liquid being returned to the desilication autoclave and the solid being injected into the digester autoclave.